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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/591,596

06/04/2007

Didier Massonnet

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FOLEY AND LARDNER LLP  
SUITE 500  
3000 K STREET NW  
WASHINGTON, DC 20007

EXAMINER

O'HARA, BRIAN M

ART UNIT

PAPER NUMBER

3644

MAIL DATE

DELIVERY MODE

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/591,596	<b>Applicant(s)</b> MASSONNET, DIDIER	
	<b>Examiner</b> Brian M. O'Hara	<b>Art Unit</b> 3644	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 04 June 2007.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 05 September 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>6/4/07</u> .  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1 and 3 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

3. Regarding claim 1, the phrase "with the control means of the propulsion means" renders the claim indefinite because it is unclear if the "the control means of the propulsion means" is the same as the "means designed to control propulsion means" or if "the control means of the propulsion means" are a separate element. Phrasing of each element throughout the claim should be consistent throughout the claims, or if the elements are separate, the phrases used to designate them should be more distinct.

4. In claim 3 the phrase "and/or" renders the claim indefinite because it is unclear screen is to be flexible, articulated, or flexible and articulated.

### ***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

**6. Claims 1-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Watson et al. (US Patent 5,249,080 A) in view of Hyde (US Patent 6,219,185 B1).**

Watson et al. discloses an autonomous device (10) for blanking out the light radiation emitted by at least one star (18), for the purposes of detecting a planet; including a blanking screen (12) on a line of sight (See line between star and final image plane in Fig. 1) between a telescope and a star (18) during a period of observation, so that the light radiation from the star is at least partially blanked from the observation aperture of the telescope during the said observation period.

7. Hyde teaches an autonomous device (10) where the device (10) includes means (32) designed to control propulsion means ("conventional thrusters", See Column 4, Lines 4-6) which themselves are designed to move or stop the device in space and/or in a pseudo-orbit in space around an observation telescope (13) that includes an observation aperture (24), with the control means ("controllable" See Column 4, Lines 4-6) of the propulsion means ("conventional thrusters", See Column 4, Lines 4-6) also being designed to position the device. At the time of invention, it would have been obvious to replace the Fresnel lens (11) on the autonomous device (10) of Hyde with a blanking screen of Watson et al. The resulting device would have the blanking capabilities of Watson et al. and the autonomous space orbiting capabilities of Hyde. The motivation for combining the two would be to place a coronagraph disclosed by Watson et al. in orbit to gather light without interference from earth's atmosphere.

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8. With regard to claim 2, Watson et al. discloses a blanking dimension of the screen (12) being of the order of magnitude of the observation aperture of the telescope (See Fig. 1). Also see Fig. 5 of Hyde.

9. With regard to claims 3-9 Hyde discloses the lens (10), which when combined with Watson et al. would be a screen or blanking device as described above, being flexible and/or articulated (See Column 5, Lines 1-4); means designed to deploy or fold the screen (32); means to move the screen (46) in relation to the device in order to modify the degree of blanking of the light from the star in relation to the observation aperture of the telescope (element 46 would at least expand and contract the screen in relation to the conventional thrusters); reflectors (60); wherein the propulsion means are designed to position the device in a pseudo-orbit around the telescope (they would inherently be capable of this); and the assembly including a telescope (13). Hyde does not specifically disclose placing reflectors on the telescope, however it is disclosed that beacons and reflectors can be placed on opposing vehicles in Column 13, lines 57-59. It would have been obvious to one of ordinary skill in the art to place the reflectors on either the screen device (as shown in Fig. 8) or the telescope device.

10. With regard to claims 10-12, the combination of Hyde and Watson et al. discussed above would inherently be capable of carrying out the method of claims 10-12. At the time of invention, it would have been obvious to one of ordinary skill in the art to use the apparatus of Hyde and Watson et al. in conjunction with a method for at least partial blanking of the light radiation emitted by at least one star from the observation aperture of an observation telescope in space where the blanking occurs during a

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period of observation, including steps in which control is exercised over means ("controllable" See Column 4, Lines 4-6) that are designed to control the propulsion means ("conventional thrusters", See Column 4, Lines 4-6) of at least one autonomous blanking device (12 of Watson et al. and 10 of Hyde) in a pseudo-orbit in space around the telescope (13) in order to position a screen (12 of Watson et al.) of the device on the line of sight between the telescope and the star during the said observation period; wherein the position of the blanking device and of the telescope are determined by means of at least one radio or laser burst (See Column 13, Lines 54-57 of Hyde); wherein, in order to modify the degree of blanking of the light from the star in relation to the observation aperture of the telescope, means (46) are employed to move the screen in relation to the device. The motivation for doing so would have been to use the apparatus in a manner conducive to its design.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian M. O'Hara whose telephone number is (571)270-5224. The examiner can normally be reached on Monday thru Friday 10am - 5pm except the first Friday of every Bi-week.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael R. Mansen can be reached on (571)272-6608. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Michael R Mansen/  
Supervisory Patent Examiner, Art Unit 3644

/B. M. O./  
Examiner, Art Unit 3644